STATUE OF LIBERTY AND NEW YORK HARBOR

Ex Libris

SEYMOUR DURST

FORT NEW AMSTERDAM (NEW YORK) 1651

When you leave, please leave this book
Because it has been said
"Ever'thing comes t' him who waits
Except a loaned book."

PHOTOGRAPHIC VIEWS

OF THE

STATUE OF LIBERTY

AND

NEW YORK HARBOR.

FROM RECENT ORIGINAL PHOTOGRAPHS.

CHICAGO AND NEW YORK:
RAND, McNALLY & CO., PUBLISHERS.
1901.

MOONLIGHT ON NEW YORK BAY.

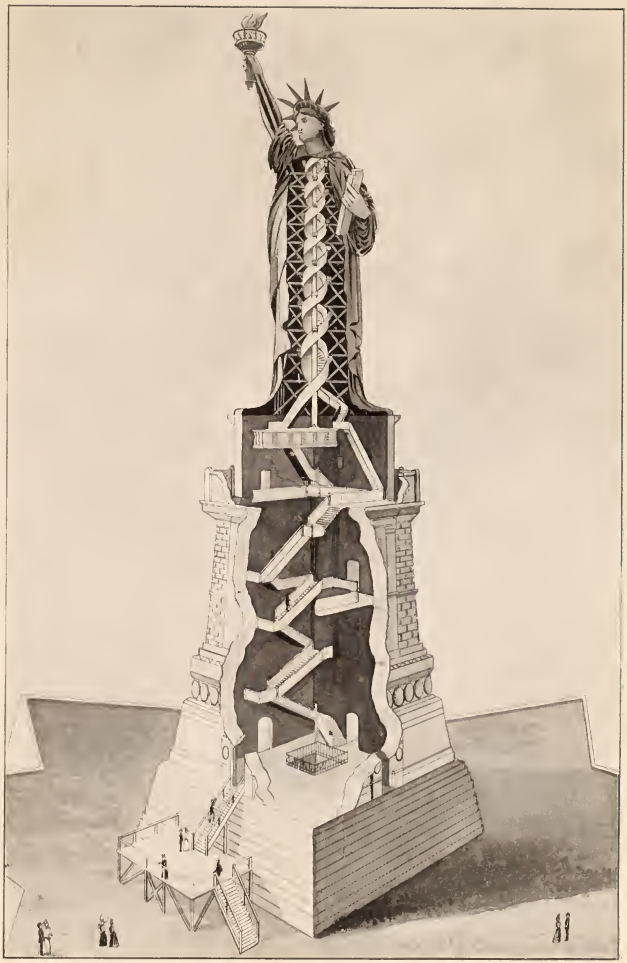
FRONT VIEW OF STATUE FROM SOUTHEAST.

VIEW OF STATUE FROM LANDING PIER.

SIDE VIEW OF STATUE FROM THE NORTHEAST.

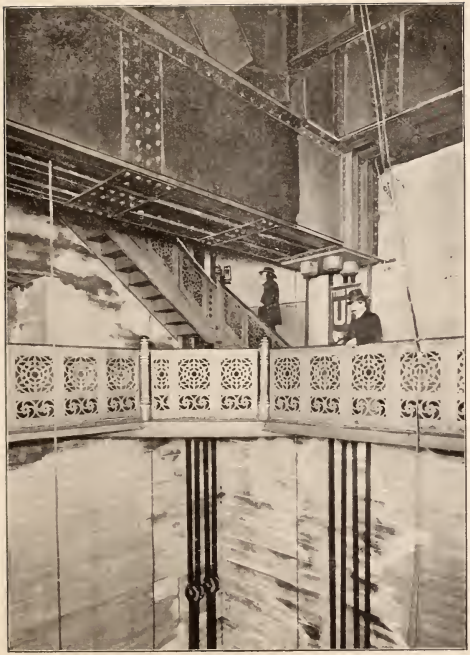
SIDE VIEW OF STATUE FROM WEST.

REAR VIEW OF STATUE FROM NORTHWEST.



SECTIONAL DIAGRAM OF PEDESTAL AND STATUE.

BEGINNING ASCENT, BASE OF PEDESTAL.

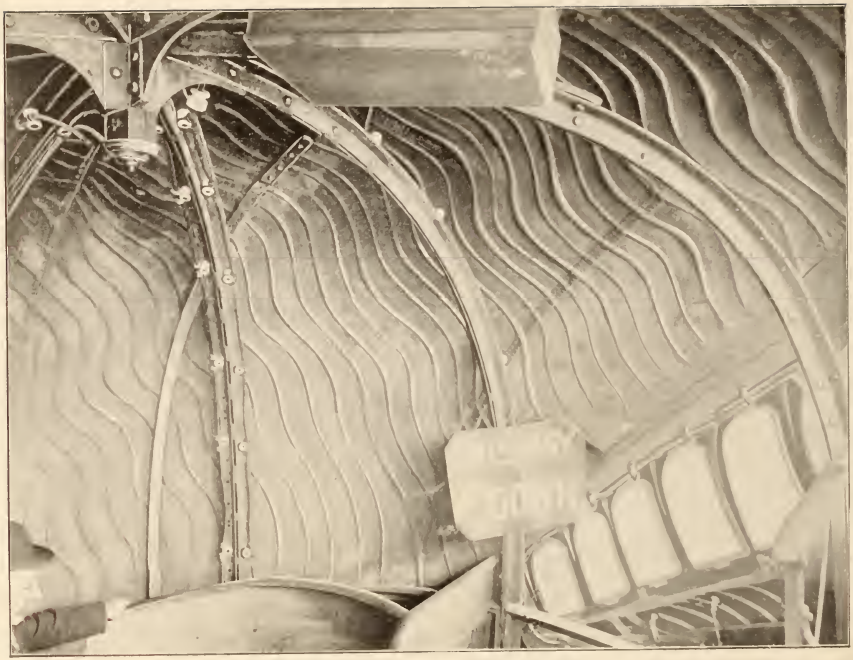


TOP GIRDERS OF PEDESTAL, SHOWING ANCHORAGE.

INSIDE OF DRAPERY, SHOWING HEEL OF SANDAL.

INTERIOR IRONWORK OF THE PLINTH.

THE WINDING STAIRS ABOVE PEDESTAL.



INTERIOR OF HEAD OF STATUE.

SALLEY PORTE OF FORT WOOD.

BALCONY OF PEDESTAL.

VIEW FROM ENTRANCE OF PEDESTAL, LOOKING TOWARD NEW YORK.

OUTER BATTERY, FORT WOOD, BEDLOE'S ISLAND.

VIEW FROM BEDLOE'S ISLAND, LOOKING TOWARD "THE NARROWS."

NORTH SIDE OF BEDLOE'S ISLAND, LOOKING TOWARD NEW YORK AND BROOKLYN.

VIEW FROM REAR OF STATUE, SHOWING ELECTRICAL PLANT AND OLD BARRACKS.

WESTERN SIDE OF BEDLOE'S ISLAND, NEW JERSEY SHORE IN DISTANCE.

STATUE OF LIBERTY BOAT LANDING.

NEW YORK BAY FROM BATTERY.

LANDING PIER, BEDLOE'S ISLAND.

BATTERY PARK AND HARBOR FROM ROOF OF WASHINGTON BUILDING, 1 BROADWAY.

VIEW LOOKING SOUTH FROM ROOF OF OFFICE BUILDING, 66 BROADWAY.

CASTLE WILLIAM, GOVERNOR'S ISLAND, NEW YORK BAY.

FORT WADSWORTH, STATEN ISLAND.

THE STATUE OF

LIBERTY ENLIGHTENING THE WORLD.

ORIGINATED in the minds of a group of French men of letters, one of whom was the sculptor, Auguste Bartholdi, who were discussing, one evening in 1865, the close of the American Civil War, the Statue of Liberty embodies the suggestion that the French people ought to join with the American people in erecting, in America, a monument that should not only commemorate the sympathy and assistance that France gave to the United States in its struggle for republican independence, but should serve as a perpetual image before the world of the idea of liberty. As this double purpose was in view, a mere shaft or memorial structure, however stately, would be inadequate, and a colossal and noble figure was needed to express to every mind the grandeur of the thought to be portrayed. The result of the conference was that Bartholdi (who was about to visit the United States) was bidden to make it his special object to introduce the idea to the American public, excite interest in it, discover the proper site, and finally to propose a design for the statue.

Full of the inspiration of this purpose, Bartholdi—already famous in Europe as a painter and sculptor, and soon afterward well known in the United States through his bronze fountain and other works at the Centennial Exposition, and his graceful statue of Lafayette in Union Square, New York—sailed for America, and found the place for his statue the moment his eyes rested upon the new world. As the steamer sailed up the magnificent harbor of New York, her passengers crowded to the rails eager for a first glimpse of the new land to which they were coming with such hope and confidence. "Here, at the gates," said Bartholdi to himself, "shall stand our figure of Freedom, welcoming, with the light of Liberty, the newcomer to these liberal shores."

When he returned to France his design was ready, popular subscription lists had been opened in all parts of the French and American republics, and preparations were at once begun for the erection of the statue. It was agreed that the majestic mien of the figure demanded a colossal size, and proportions were decided upon far vaster than anything heretofore attempted. The massive Memnon at Thebes, in Egypt, was only 62 feet high; the figure of Borromeo, on the bank of Lake Maggiore, 66 feet, that of Arminius, in Westphalia, about 92 feet, while the Colossus of Rhodes (if it ever existed) was only 105 feet high. Bartholdi planned a height of more than 150 feet for his colossus.

For such a figure a solid construction was impracticable, and the sculptor decided upon building his statue hollow, composing it of an iron framework clothed with thin plates of copper, bent and hammered into the required form. To accomplish this a model was first made one-sixteenth of the ultimate size, from which a second model, four times as large, was copied in plaster. From this a third, and finally corrected model of full size was constructed, by erecting a framework of wood covered with a shell of plaster perfected in details by the chisel. From this full-size model were then constructed molds of wood in as many sections as necessary (about 300), into which the copper sheets, each from one to three yards square and an eighth of an inch thick, were bent and hammered until each had assumed the required form, and was prepared to take its place in the completed whole. All the shaping was thus done from the inside, and mainly by skillful hammering. This is known as *repoussé* work.

Meanwhile the interior framework, or skeleton, was under construction from designs by Eiffel, the great engineer, who distinguished himself by building the very lofty "Eiffel Tower" which was the most conspicuous feature of the last world's fair in Paris.

The money necessary for the statue was raised by means of fairs, entertainments, and subscription papers circulated in all parts of France. None of the subscriptions were of great amount, and these funds came slowly, so that the work had to be suspended from time to time, but it was never abandoned. The hand and torch were first made, and were exhibited in the Centennial Exposition, at Philadelphia, and the head was finished in time to exhibit at the Paris Exposition of 1878. Three years later all the parts were ready to be put together, and on October 24, 1881, the centennial anniversary of the decisive battle of Yorktown, the workmen began to set the statue up, the Hon. Levi P. Morton, then United States Minister at Paris, driving the first rivet with much ceremony.

Meanwhile, through the efforts of Richard Butler, Esq., of New York, a personal friend of Mr. Bartholdi, a large American Committee was formed of influential men in all parts of the country, with the following gentlemen as Executive Committee: The Hon. Wm. M. Evarts, Chairman; Richard Butler, Secretary; Henry F. Spaulding, Treasurer; Joseph W. Drexel, Parke Godwin, J. W. Pinchot, V. Mumford Moore, and Frederick A. Potts. This committee still exists, but some of the original members have died, and have been replaced by Cornelius N. Bliss, Charles Stewart Smith, Samuel P. Avery, and David H. King, Jr. All these gentlemen devoted much time, attention, and money to the undertaking, and are entitled to be remembered with patriotic gratitude, especially Messrs. Butler, Spaulding, and King. It is not too much to say that had not Mr. King placed his great ability and experience as an engineer at the disposal of the committee, the pedestal could not have been built, nor the statue erected, until years after the time when it was completed. The mainspring of continuous life in this committee is Mr. Richard Butler, whose perpetual interest sustains the effort to increase the fund and to carry to completion the plans for the beautifying of Bedlow's Island as a worthy setting for the grand monument it upholds.

This committee, as soon as formed, secured from Congress the appropriation of Bedlow's Island, and began collecting money to pay for the pedestal, which was to be our part of the memorial. But this proved a very difficult matter. Americans, as a nation, are not prone to enthusiasm over a sentiment, and subscriptions (chiefly from New York City) came in slowly. Designs were drawn by the eminent architect, Richard M. Hunt, and the foundation of the pedestal was at length begun in April, 1883, after which the work progressed until December, 1884, when it stopped. The whole project seemed likely to fail, when *The World*, a New York newspaper, urged so effectively upon the people the glory of the cause, that over $100,000 were raised, enabling the committee to finish the pedestal in 1886.

The statue itself had meanwhile been standing on view in Paris, and now preparations were made to take it down and send it to New York. The French government made a formal presentation of it to the American people, and delegated a warship to carry it across the ocean, and other ships to participate in the celebration of its reception at New York. In May, 1886, it was embarked upon the transport Isere, and on the 17th day of June it reached New York, where great preparations had been made to receive it. A naval demonstration by warvessels, yachts, and hundreds of private steamers, and a great military parade in the city, terminated in a banquet to the officers of the French ships and made a magnificent fête day.

The erection of the statue was immediately begun. Sunk into the pedestal, sixty feet below the top, were massive steel cross-beams, and at the top another series of cross-beams, connected (as may yet be seen) with those below them by strong ties. These formed the immovable anchorage to which the statue is bolted. Erected upon them are the four great stanchions or central supports which form the core of the framework, and these approach one another until they nearly meet in the head. These stanchions, firmly bolted and braced together, support the whole structure, and do it in a scientific

way, for every one of the tangled web of branching beams and braces, which now appears so confusing, was placed where it is only after careful study and calculation. The shell of the statue consists of 300 plates, but these are so thin and pliable, and of such varied shapes, that no one can be expected to help sustain the remainder. Each one, therefore, is not only strengthened by flat copper bands, but is supported by its own system of iron braces carrying its weight directly to the central frame. The total weight of the plates is eighty-eight tons.

In erecting such a great statue two things had to be considered that seem trifling, but which, if neglected, might destroy the statue in one day, or cause it to crumble slowly to pieces. One is the sun and the other the sea-breeze. Precautions had to be taken against the destructive effects of both. The heat of the sun, rising sometimes to 100 degrees Fahrenheit, would pull the statue out of shape unless means were provided allowing it to move upon itself, or rather upon the framework beneath the surface. "Each bolt will slip a trifle as the copper expands in the hot August sunshine, and slide back again when the freezing winds blow and the vast figure shrinks together in the cold. Besides this, the copper surface is so thin and elastic that it will bend slightly when heated and still keep its general shape." To this, Dr. Charles Barnard, a scientific writer upon this subject, adds the following details:

"The salt air blowing in from the sea has thin fingers and a bitter, biting tongue. If it finds a crack where it can creep in between the copper surface and iron skeleton there will be trouble at once. These metals do not agree together, and . . it seems that every joining of points of copper and iron makes a tiny battery, and so faint shivers of electricity would run through all the statue, slowly corroding and eating it into dust. This curious, silent, and yet sure destruction is prevented by packing every joint throughout the statue, wherever copper approaches iron, with an insulating material (asbestos) which keeps the two metals from actually touching one another."

The building of the pedestal to support this massive structure — weighing 450,000 pounds, and towering 300 feet in the air — against winds that might exceed 100 miles an hour, required the greatest care. To Gen. Charles P. Stone, U. S. A., was entrusted the engineering of this structure. The foundation is based upon a bed of clayey gravel, a few feet above the level of the bay, and consists of a stepped pyramid of concrete, rising 52 feet 10 inches, and having within it a hollow center or shaft about 26 feet square.

Upon the top of this concrete pyramid, 60 feet 10 inches above mean low-water mark, and high above the surrounding walls of Fort Wood, begins the pedestal proper, a structure of granite, simple, massive, and grand, but not so ornate as to diminish the artistic value of the statue it supports. "At its base the pedestal proper," says Garnett, "is 62 feet square. In the center of each side, at the base, is a doorway. On either side of every door is a projecting disk of stone, on which are placed the coats of arms of France and the United States in relief. A good architectural effect is produced by the rough stone-work at the corners of the pedestal. At an elevation of 72 feet 8 inches the walls of the pedestal recede, leaving on every side . . . a balcony upon which doors from the inside open. The view from this balcony is among the finest that can be enjoyed anywhere in the vicinity of New York."

Entering the door of the pedestal you find yourself in a large chamber against whose wall clings a stairway that winds its way to the foot of the statue. Here, on the level of the balcony at the summit of the pedestal, it divides into two narrow stairways, that a few feet above your head twist together about a central column and entwine it to the statue's head, 100 feet above. One of these is the ascending staircase, the other the descending one. Both have high guardrails, are fitted with resting-places at short intervals, and are lighted by electricity, so that the ascent of the 154 steps is a simple and safe matter, which needs only to be done slowly, and will enable one to examine thoroughly the ingenious construction of the

monument. A ladder runs up the right arm some fifty feet into the torch, but this is not usually open to visitors.

Arrived at the top you find yourself in a circular chamber, which is the interior of the statue's forehead and whose windows look out through the rim of the coronet just underneath the great spike-like rays.

The Statue of Liberty is held as a trust by the United States, which has covenanted to care for it perpetually and to provide for its proper illumination. The electric power-house is near the south shore of the island and is open to visitors.

Bedlow's Island and the Statue of Liberty are reached by the train and comfortable ferry steamboat, which makes an hourly trip during the day from the wharf at the Barge office, between the South Ferries and the Battery. The distance to the island is about two miles, and is of itself a very pleasurable experience. Light refreshments may be purchased on the boat and at the island wharf. The fare for the round trip is 25 cents, and the hour's interval between two trips gives sufficient time to see the statue and its surroundings.

The following dimensions of the Statue of Liberty Enlightening the World are interesting and worthy of preservation:

	Feet	In.
Height from base to torch	151	1
Foundation of pedestal to torch	305	6
Heel to top of head	111	6
Length of hand	16	5
Index finger	8	0
Circumference at second joint	7	6
Size of finger nail	13 x 10 in	
Head from chin to cranium	17	3
Head thickness from ear to ear	10	0
Distance across the eye	2	6
Length of nose	4	6
Right arm, length	42	0
Right arm, greatest thickness	12	0
Thickness of waist	35	0
Width of mouth	3	0
Tablet, length	23	7
Tablet, width	13	7
Tablet, thickness	2	0

DIMENSIONS OF THE PEDESTAL.

	Feet	In.
Height of pedestal	89	0
Square sides at base, each	62	0
Square sides at top, each	40	0
Grecian columns, above base	72	8

DIMENSIONS OF THE FOUNDATION.

	Feet	In.
Height of foundation	65	0
Square sides at bottom	91	0
Square sides at top	66	7

DATES IN THE HISTORY OF THE STATUE.

French-American Union	1874
Work on arm began	1875
Arm and torch finished	1876
Placed on exhibition, Philadelphia	1876
Liberty Island ceded by Congress	1877
Face and head completed	1878
Entire statue finished	July 7, 1880
Mounted in Paris	October, 1881
Ground broken for pedestal	April, 1883
Foundation completed	April, 1885
Pedestal completed	1886
First rivet driven on statue	July 12, 1886
Statue completed	October 28, 1886

The statue weighs 450,000 pounds, or 225 tons.

The bronze alone weighs 200,000 pounds.

Forty persons can stand comfortably in the head, and the torch will hold twelve people.

The total number of steps in the temporary staircase, which leads from the base of the foundation to the top of the torch, is 403; from the ground to the top of the pedestal, 195. The number of steps in the statue, from the pedestal to the head, is 154, and the ladder leading up through the extended right arm to the torch has 54 rounds.